Figure 1A

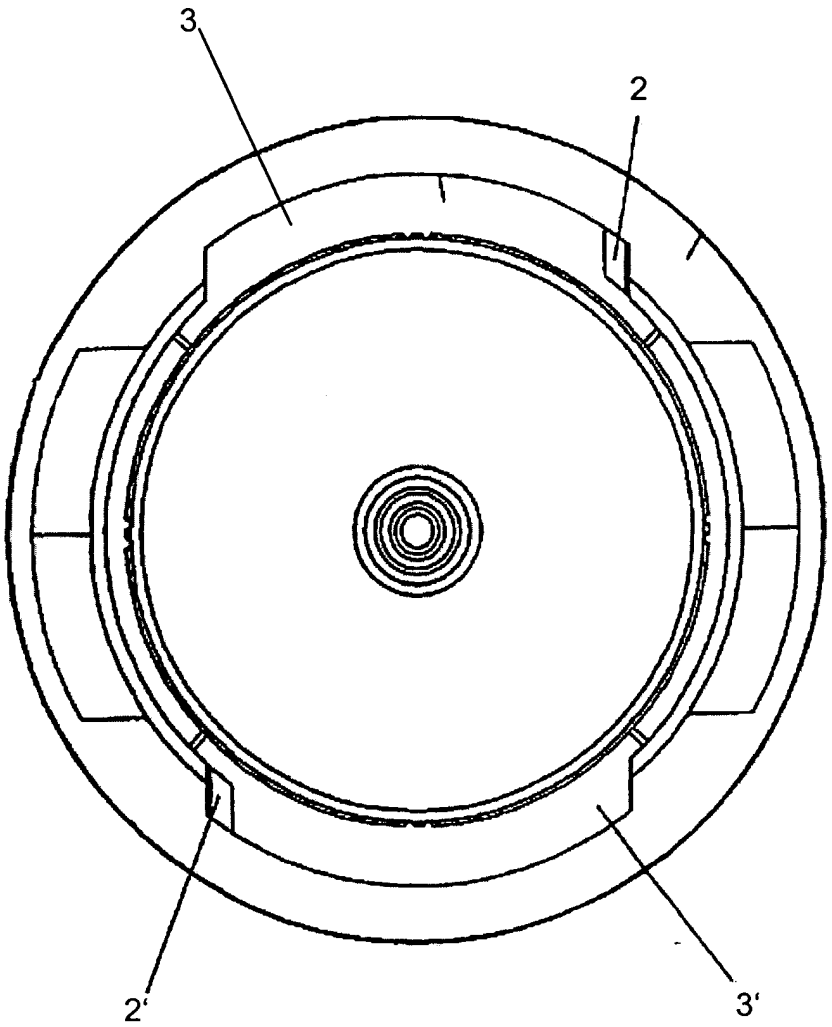
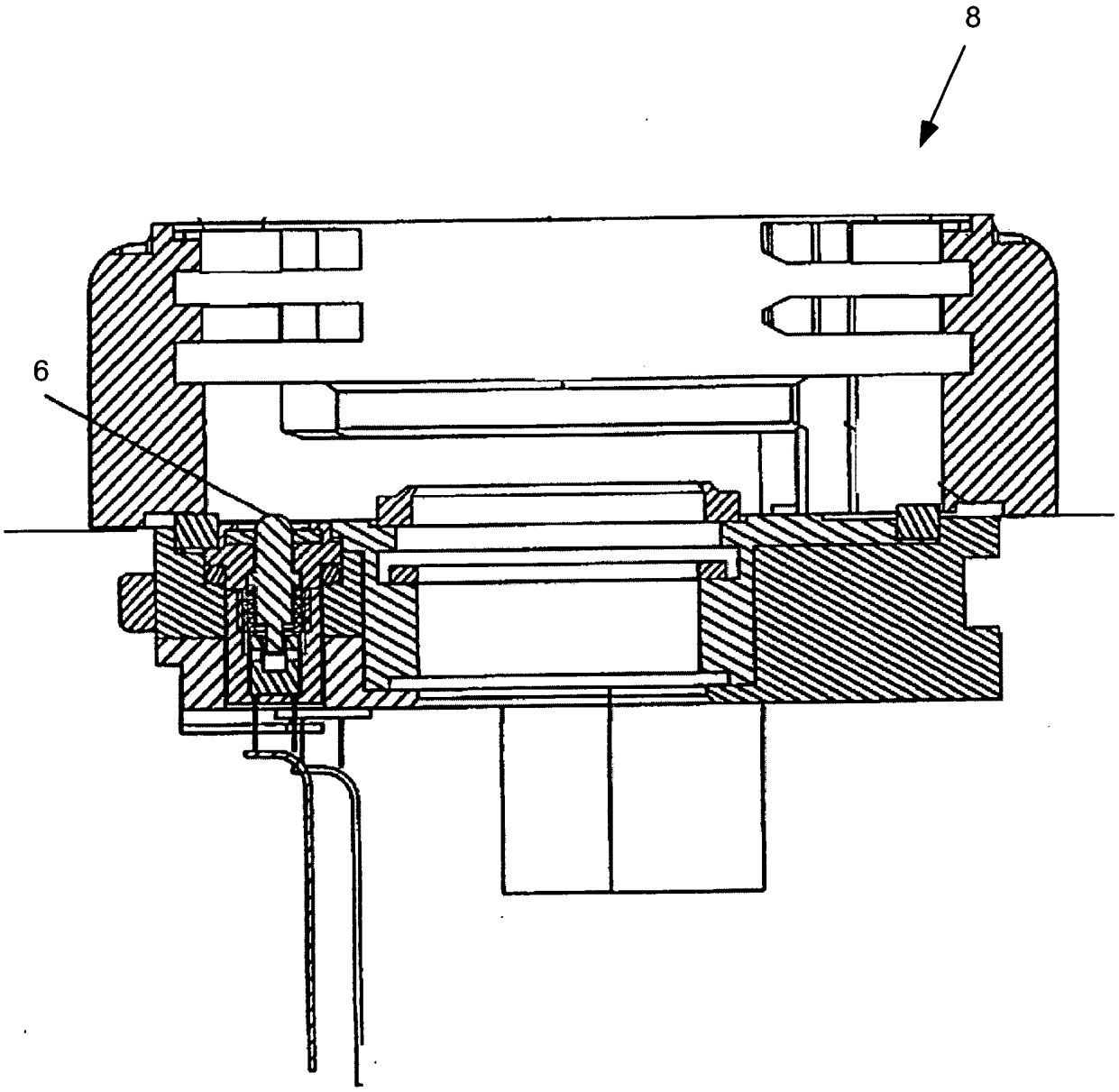


Figure 1B



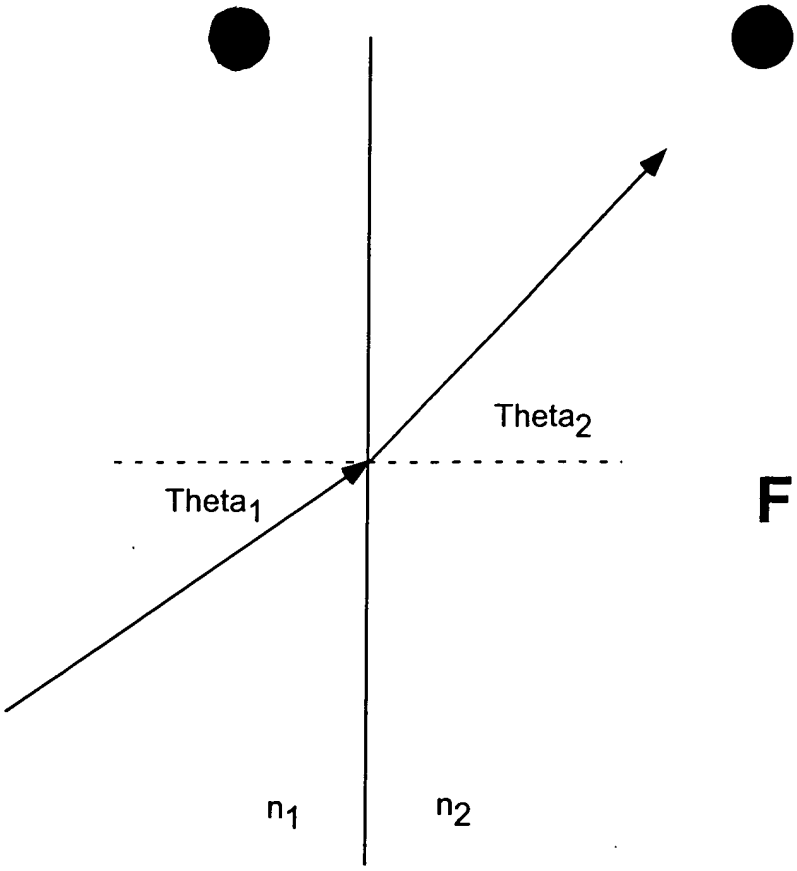


Figure 2A

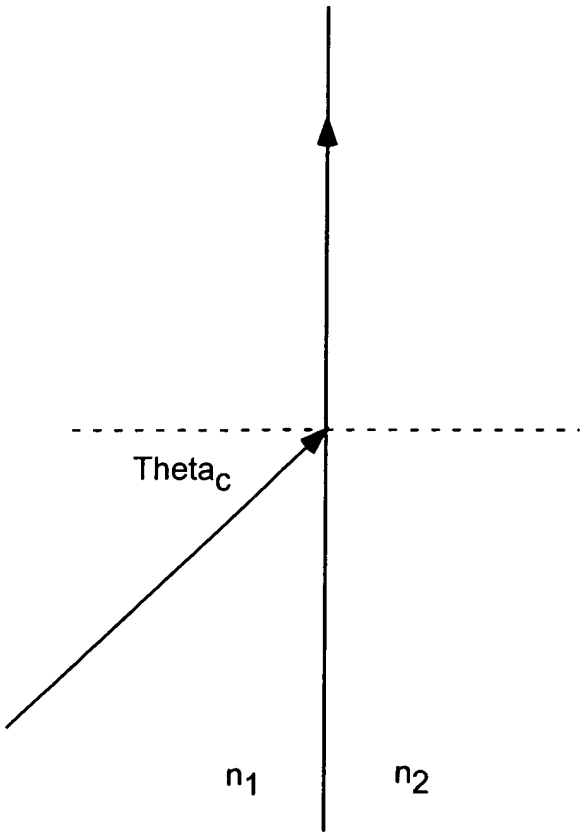


Figure 2B

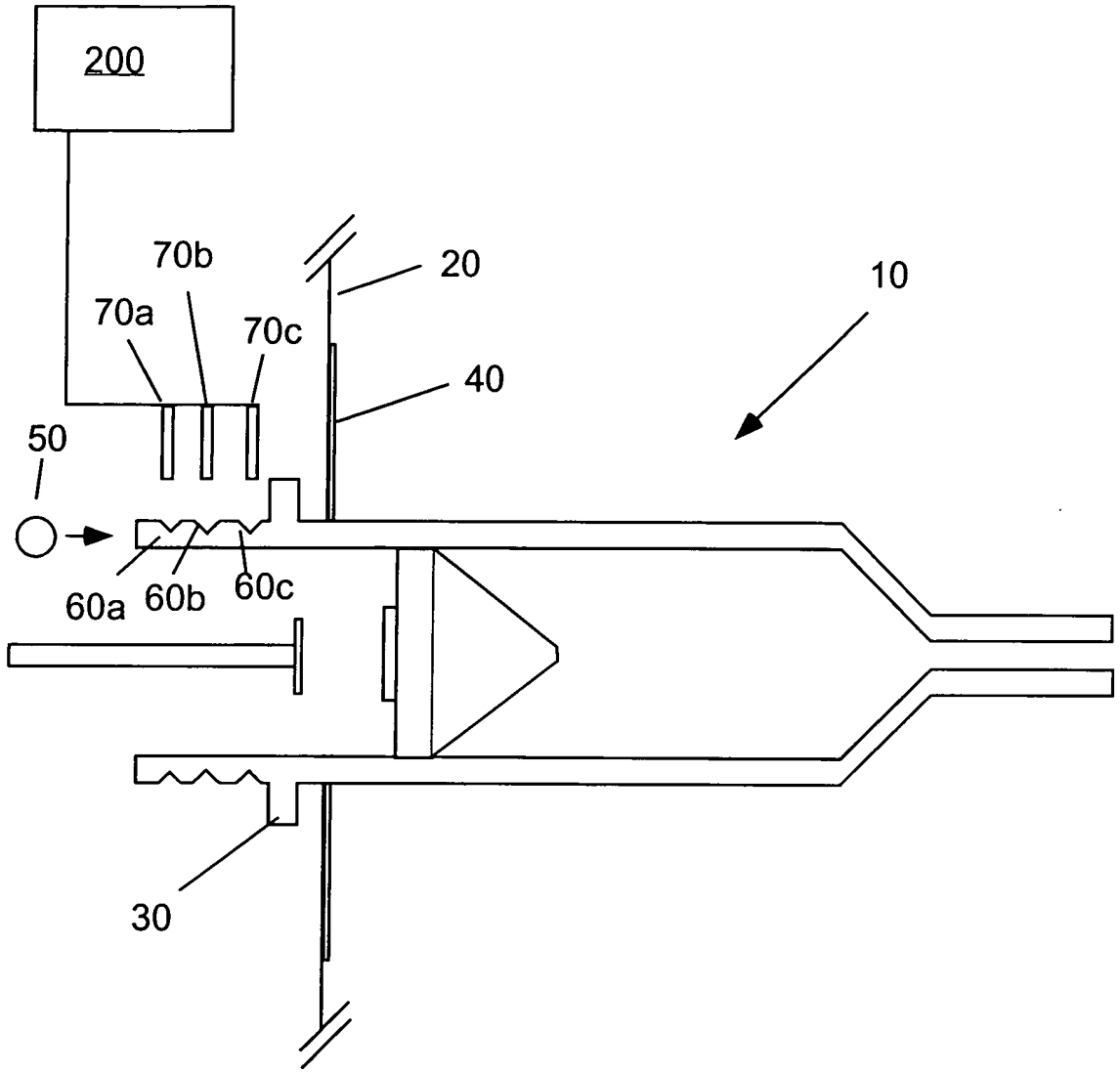


Figure 2C

$n_1 > n_2$

Total Internal Reflection

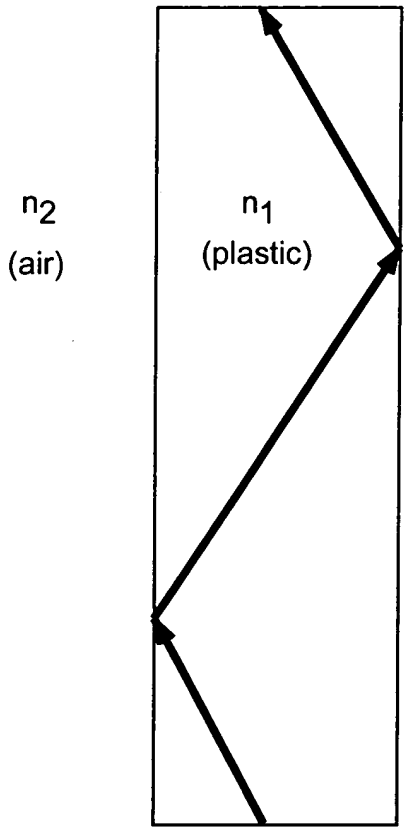


Figure 2D

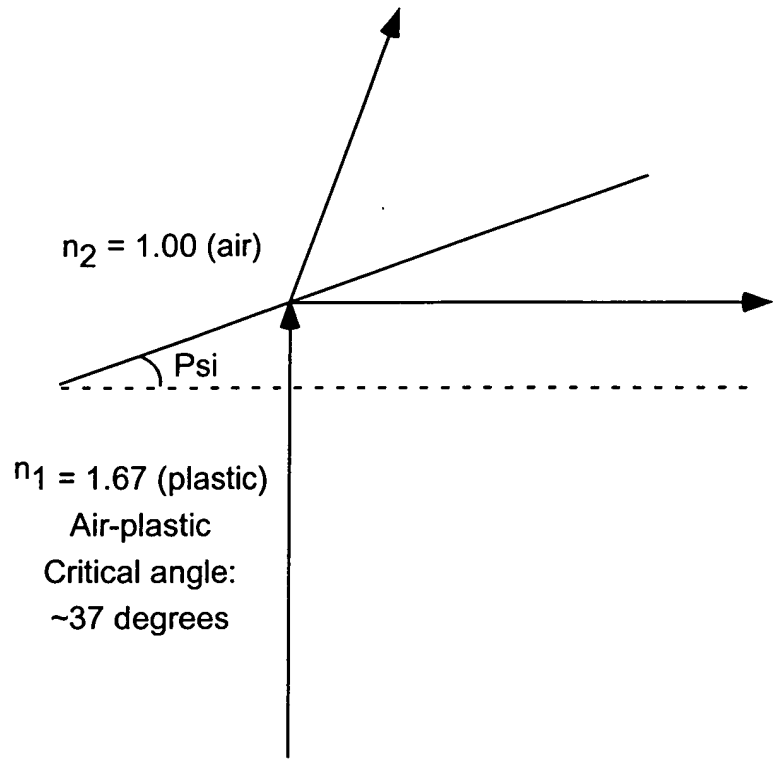

n_2 = 1.00 (air)
Psi
n_1 = 1.67 (plastic)
Air-plastic
Critical angle:
~37 degrees

Figure 2E

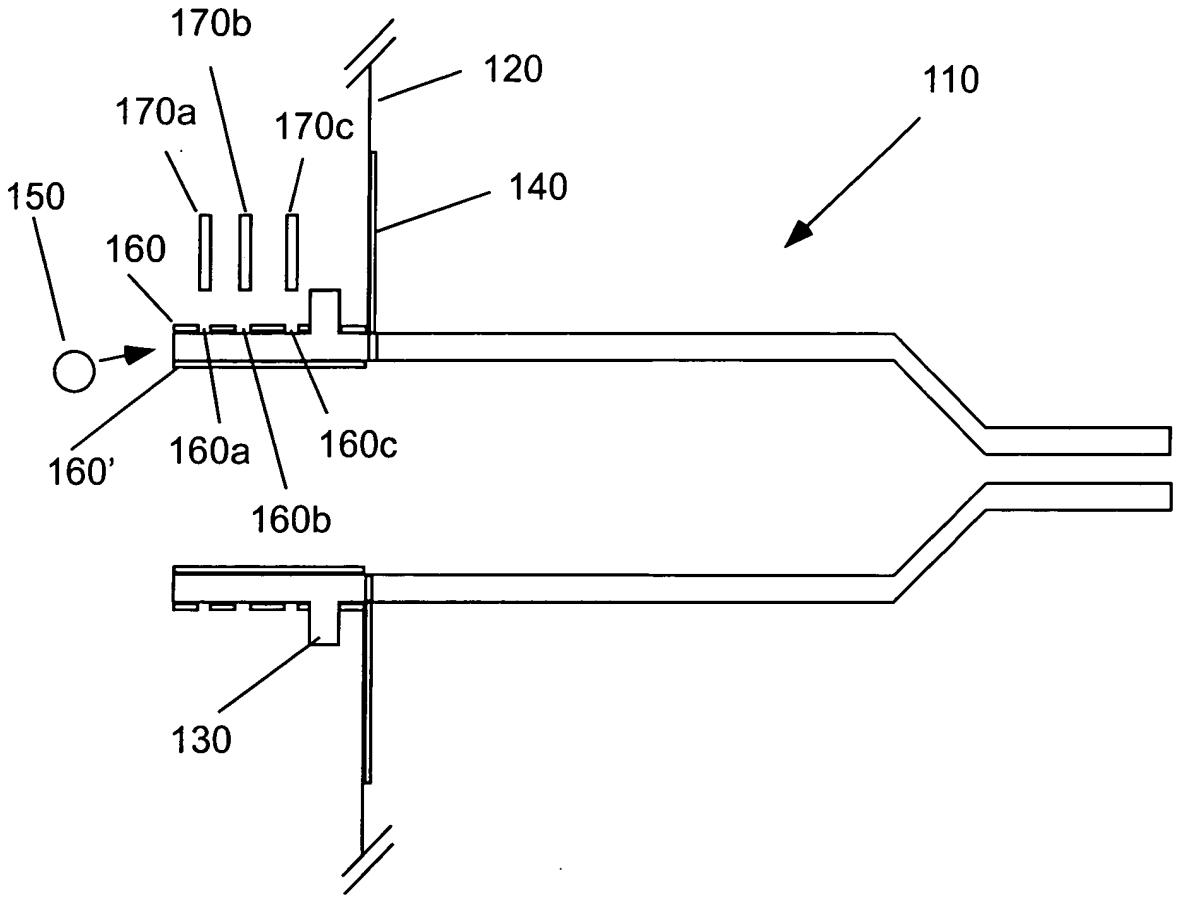


Figure 2F

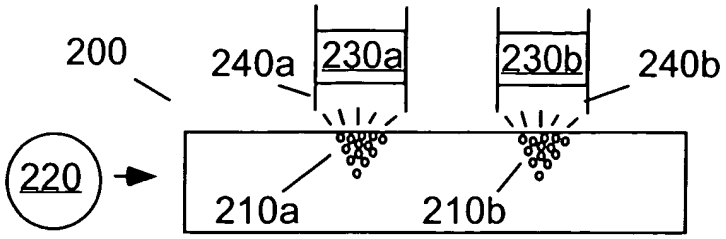


Figure 3A

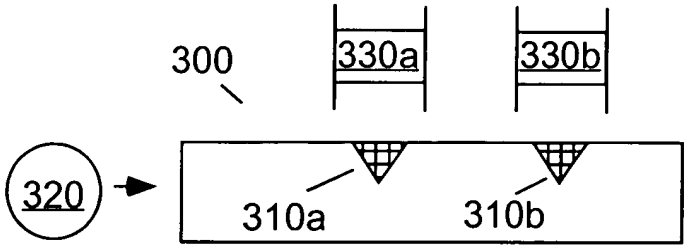


Figure 3B

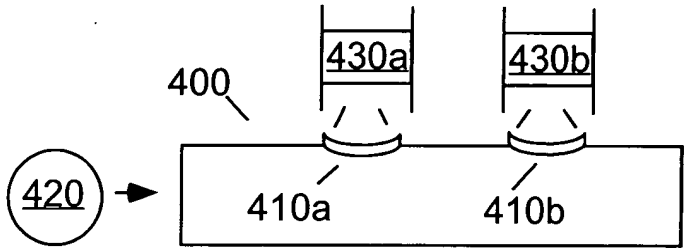


Figure 3C

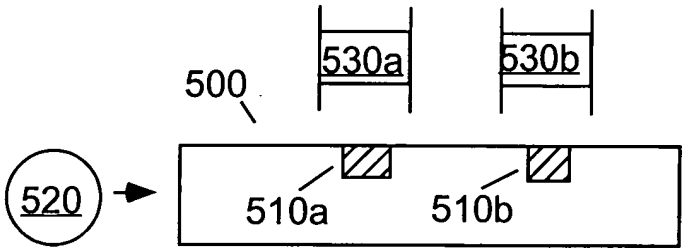


Figure 3D

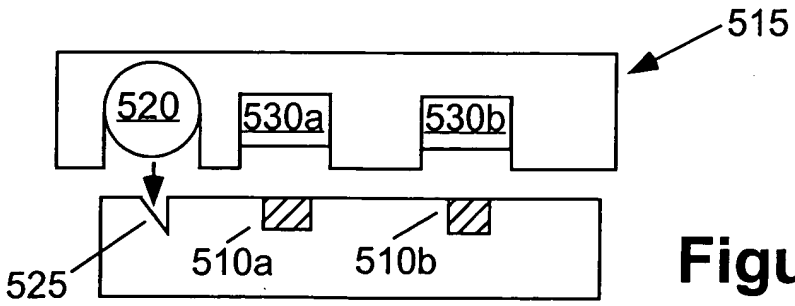


Figure 3E

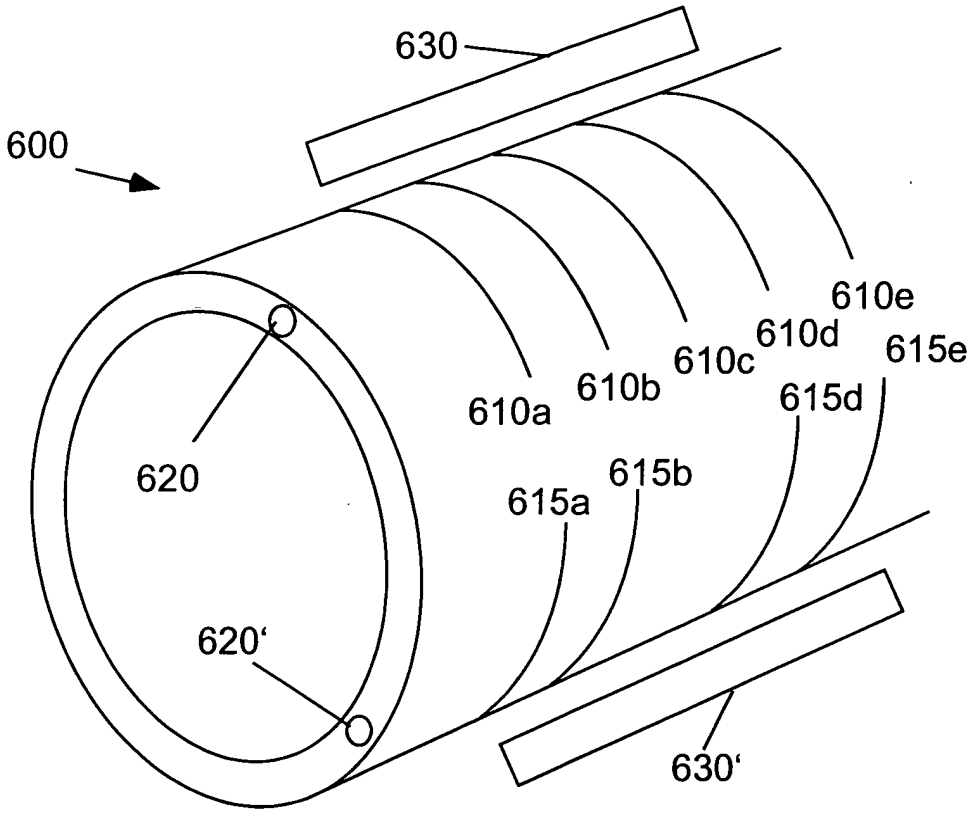
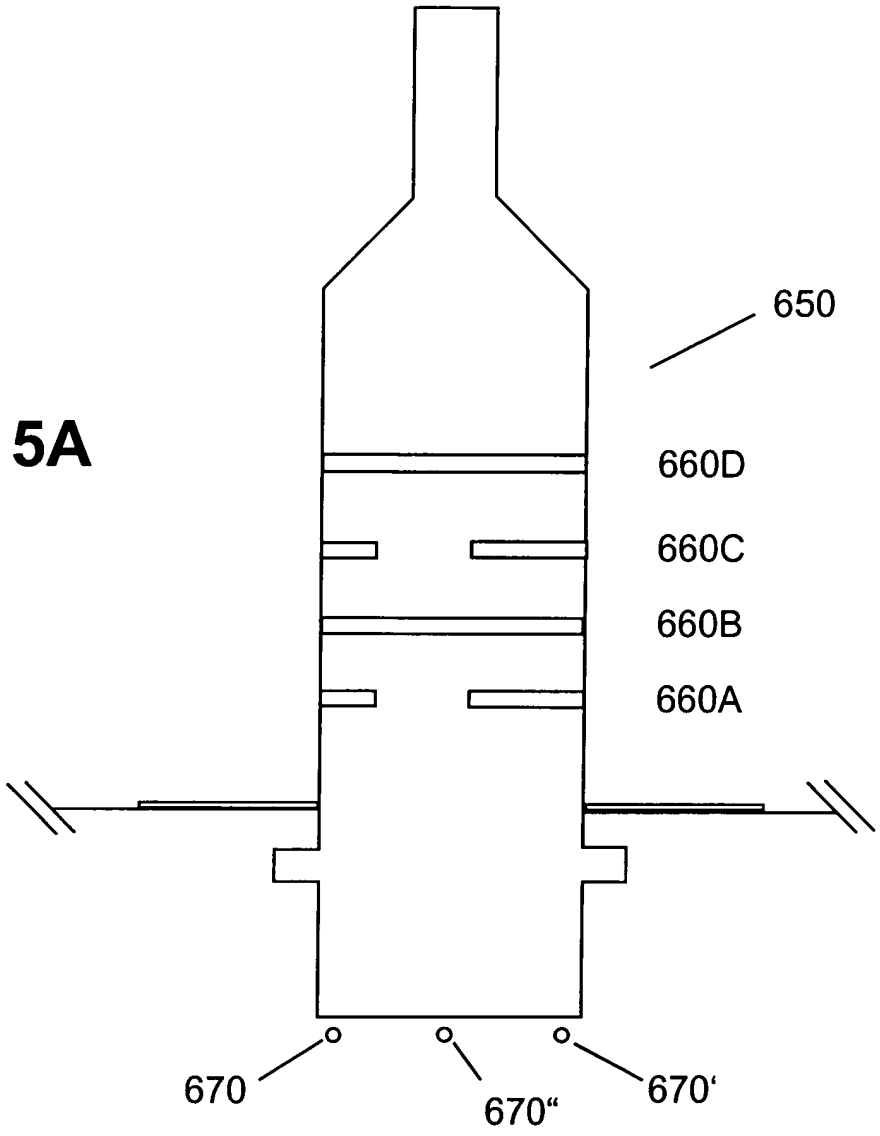

630
600
610e
610d
610c
615e
610b
615d
610a
620
615b
615a
620'
630'

Figure 4

Figure 5A



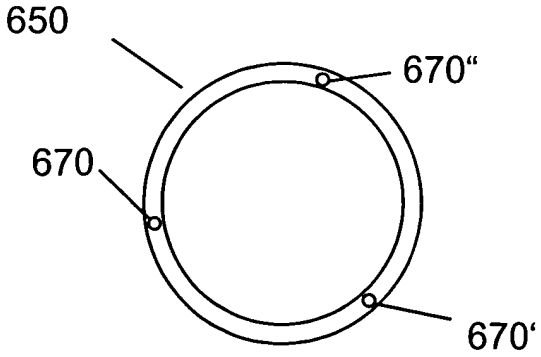
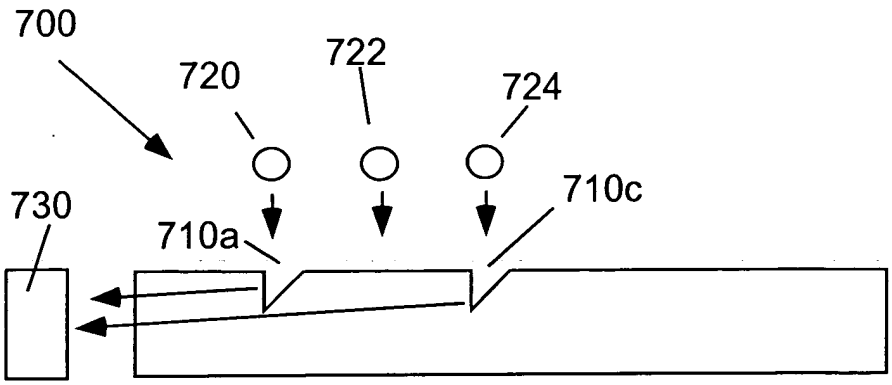


Figure 5B

Figure 6



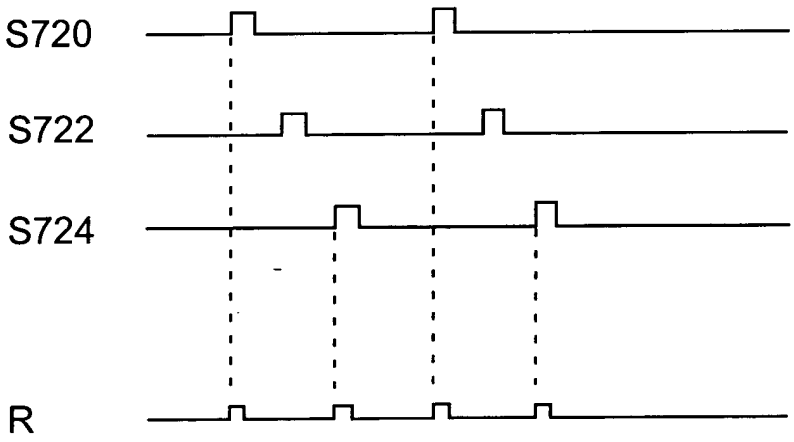


Figure 7

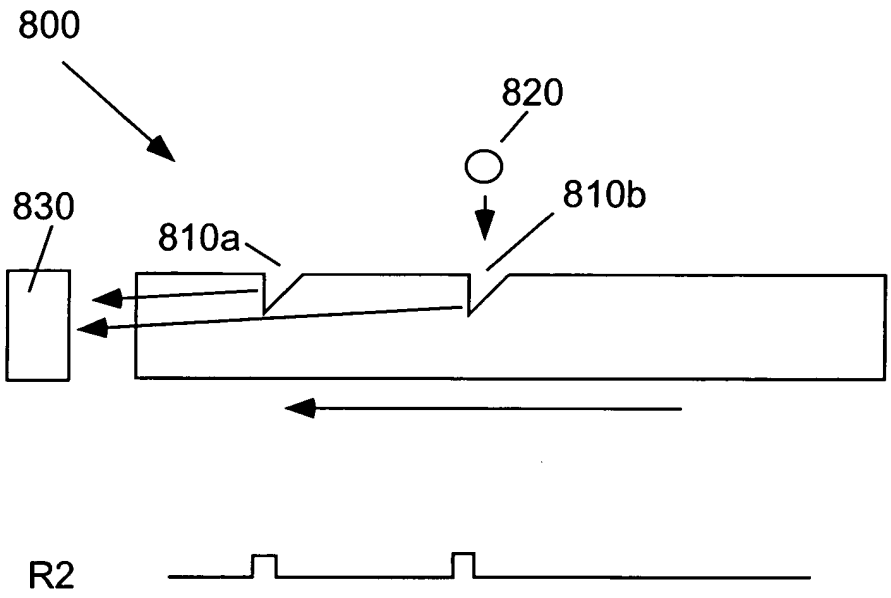
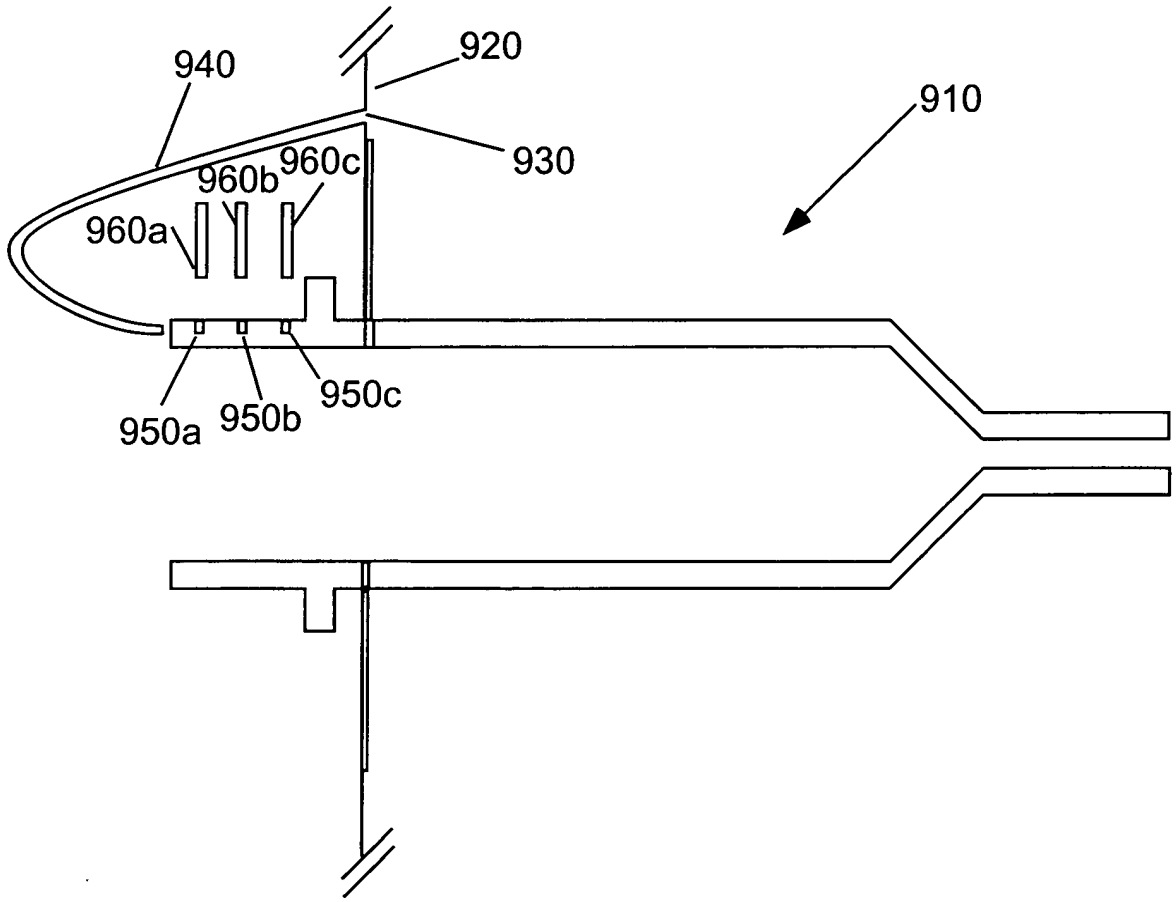


Figure 8



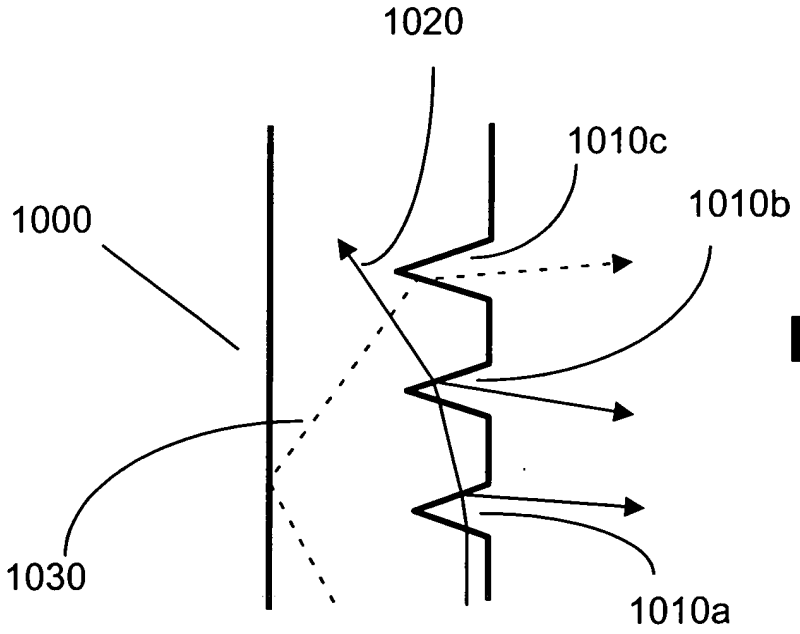


Figure 9

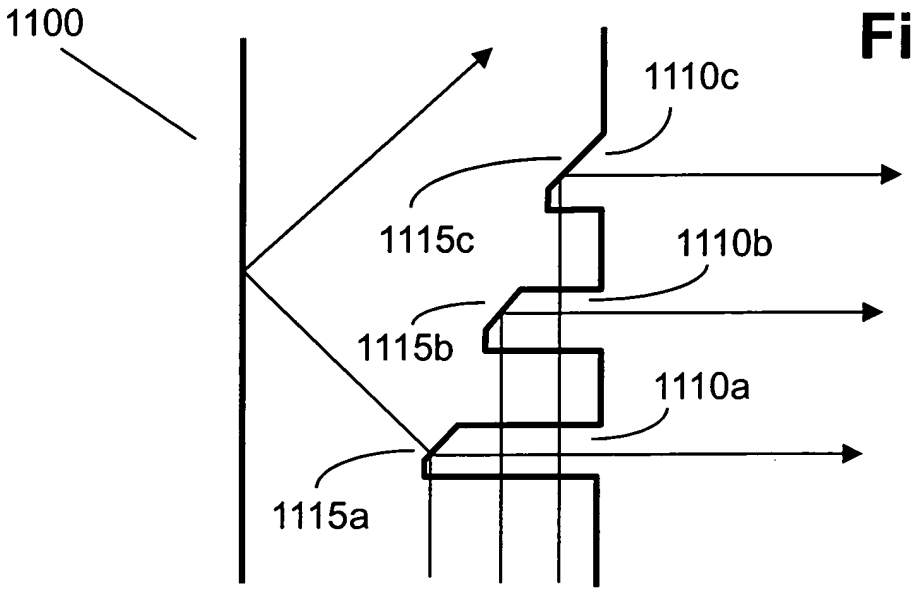


Figure 10

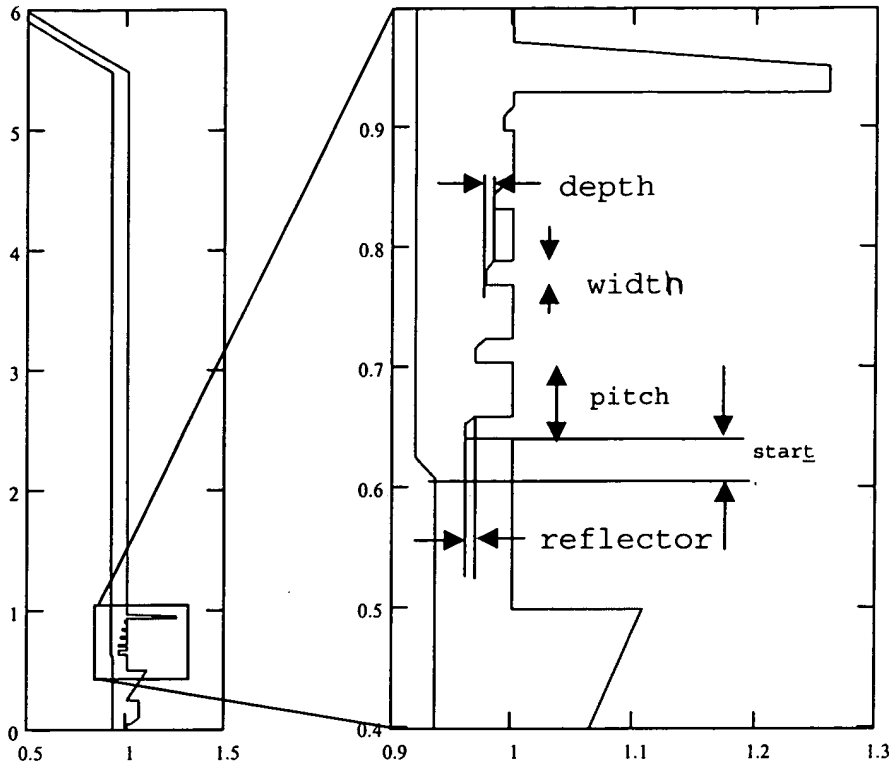
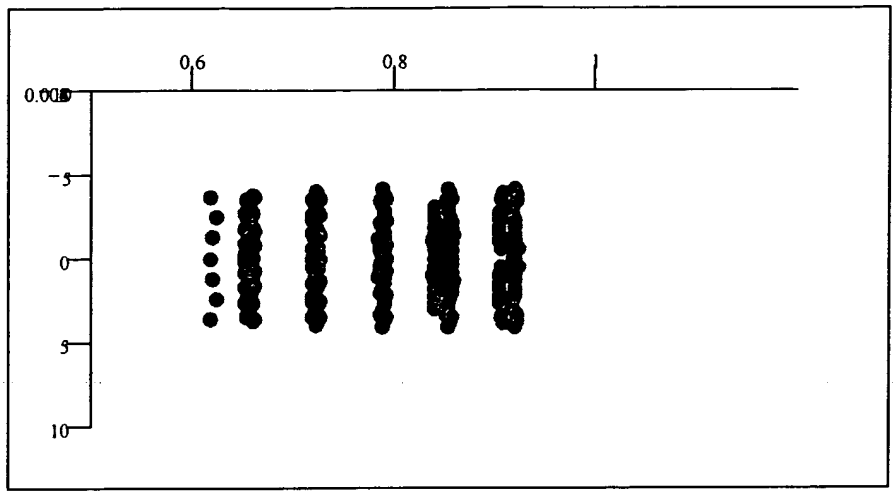

depth
width
pitch
start
reflector
6
5
4
3
2
1
0
0.5
1
1.5
0.9
0.8
0.7
0.6
0.5
0.4
0.9
1
1.1
1.2
1.3

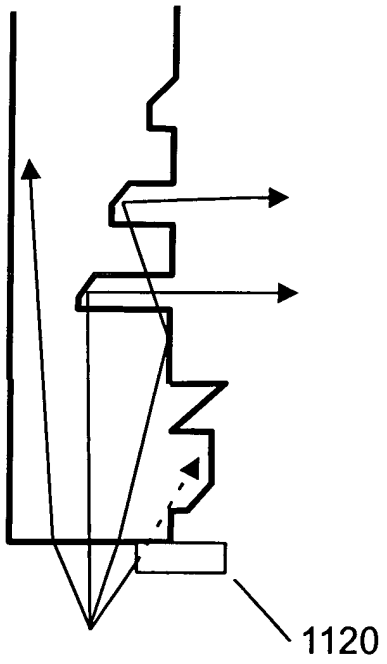
Figure 11



$$\frac{(\text{points}^T)^{\langle 0\rangle}}{\text{deg}}, (\text{points}^T)^{\langle 1\rangle}, (\text{points}^T)^{\langle 2\rangle}$$

Figure 12

Figure 13



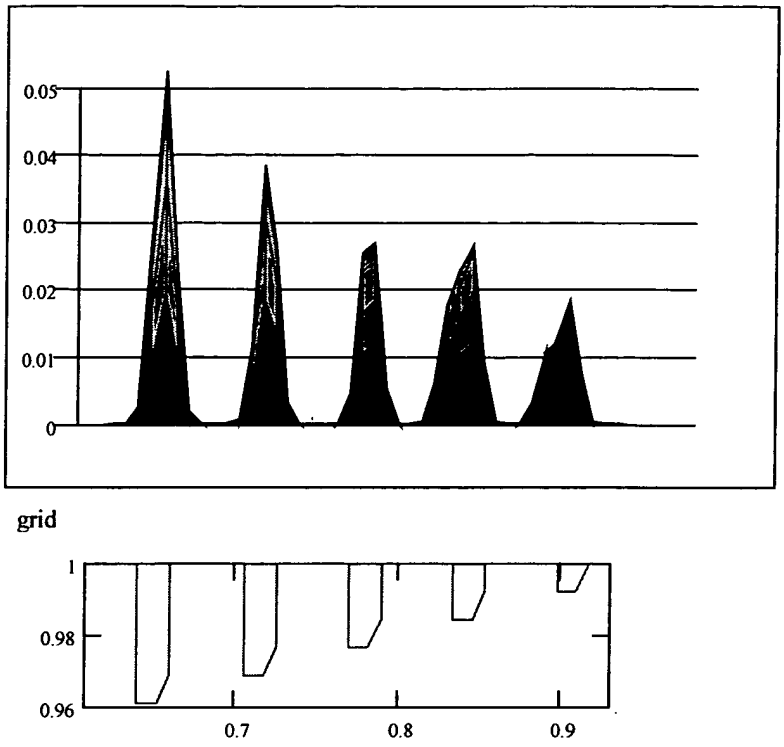


Figure 14

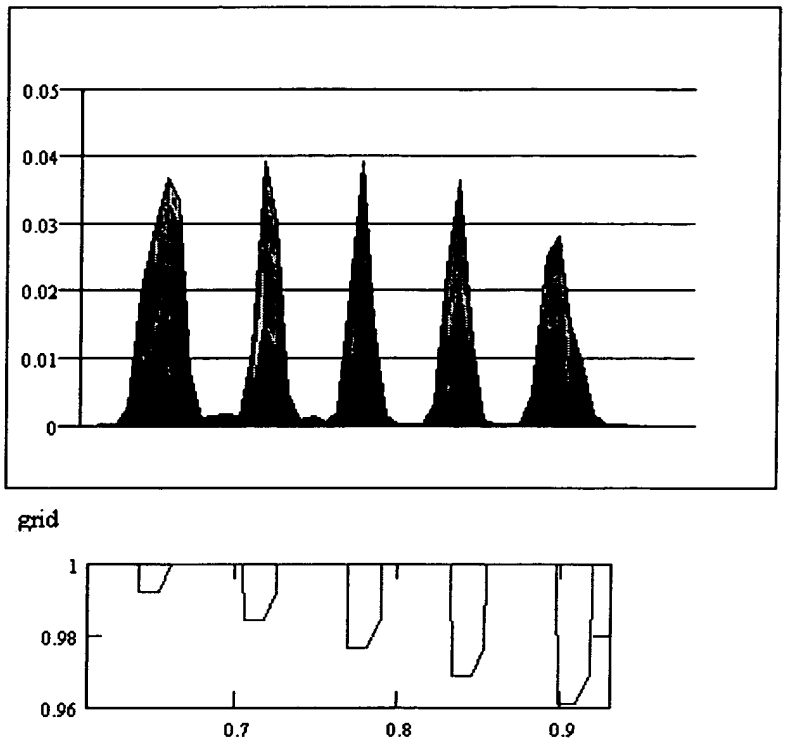


Figure 15

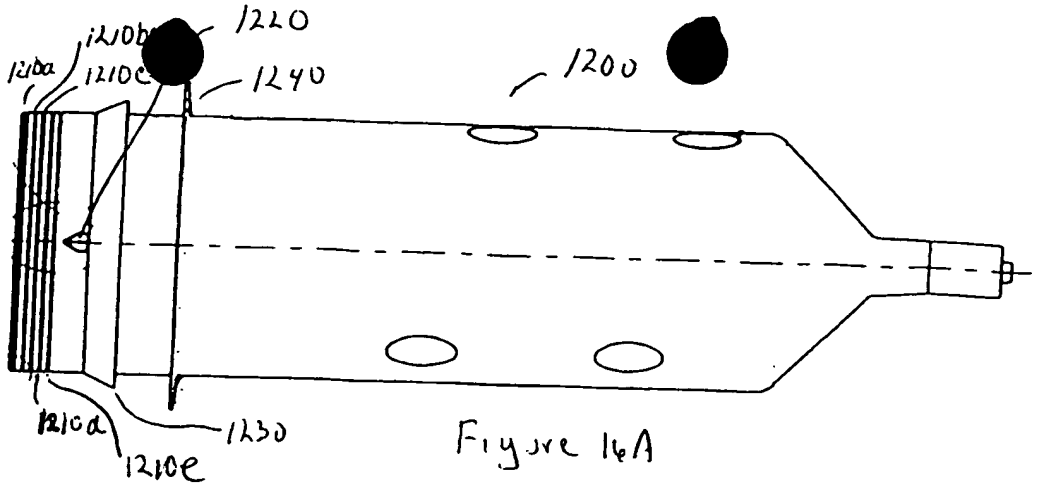


Figure 16A

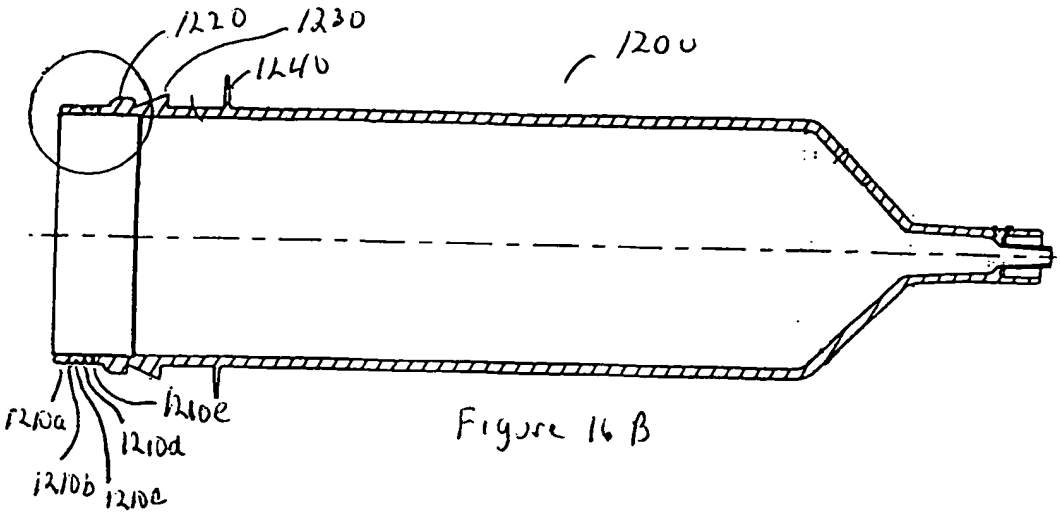


Figure 16B

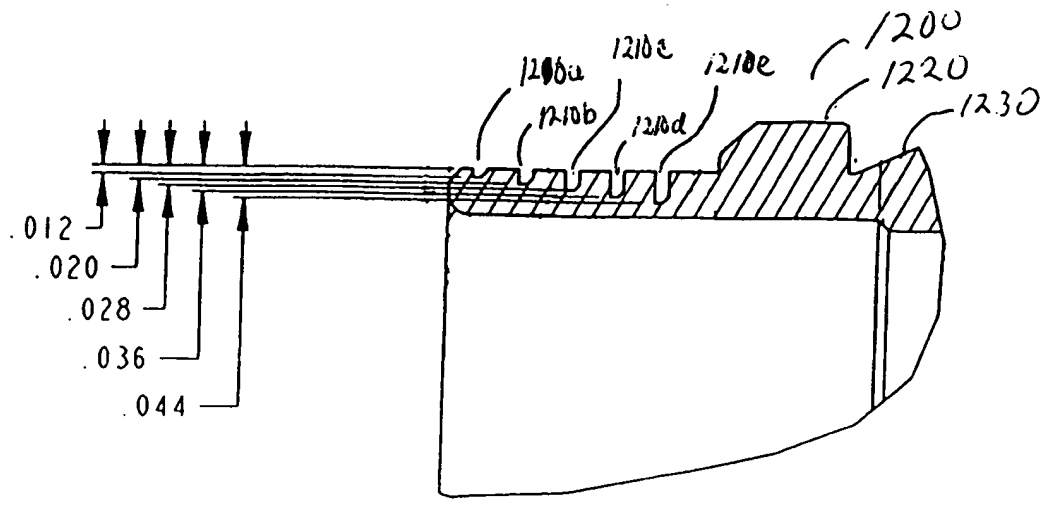


Figure 16C

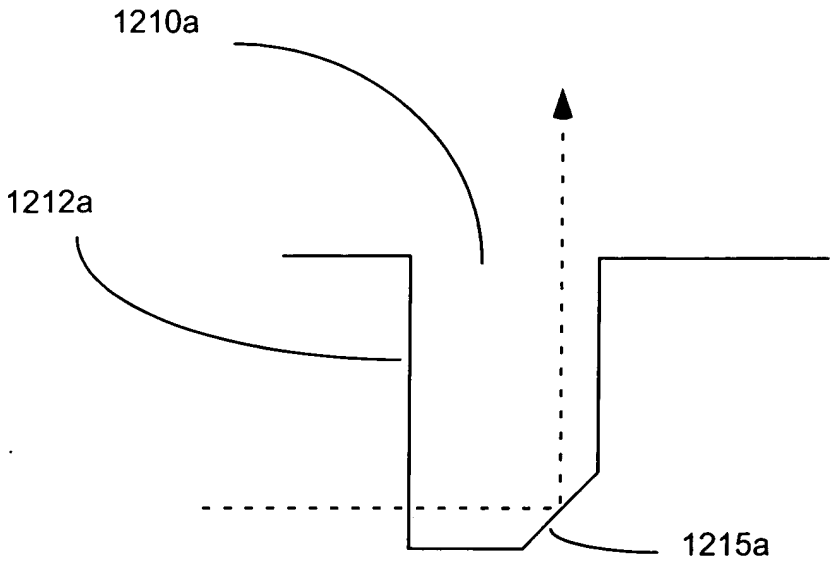


Figure 16D

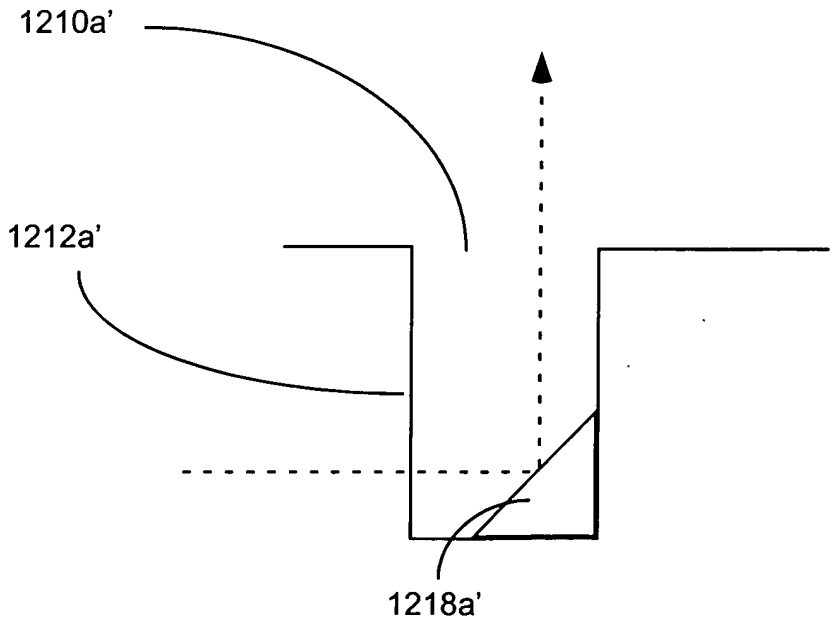


Figure 16E

TOBIO 8645960

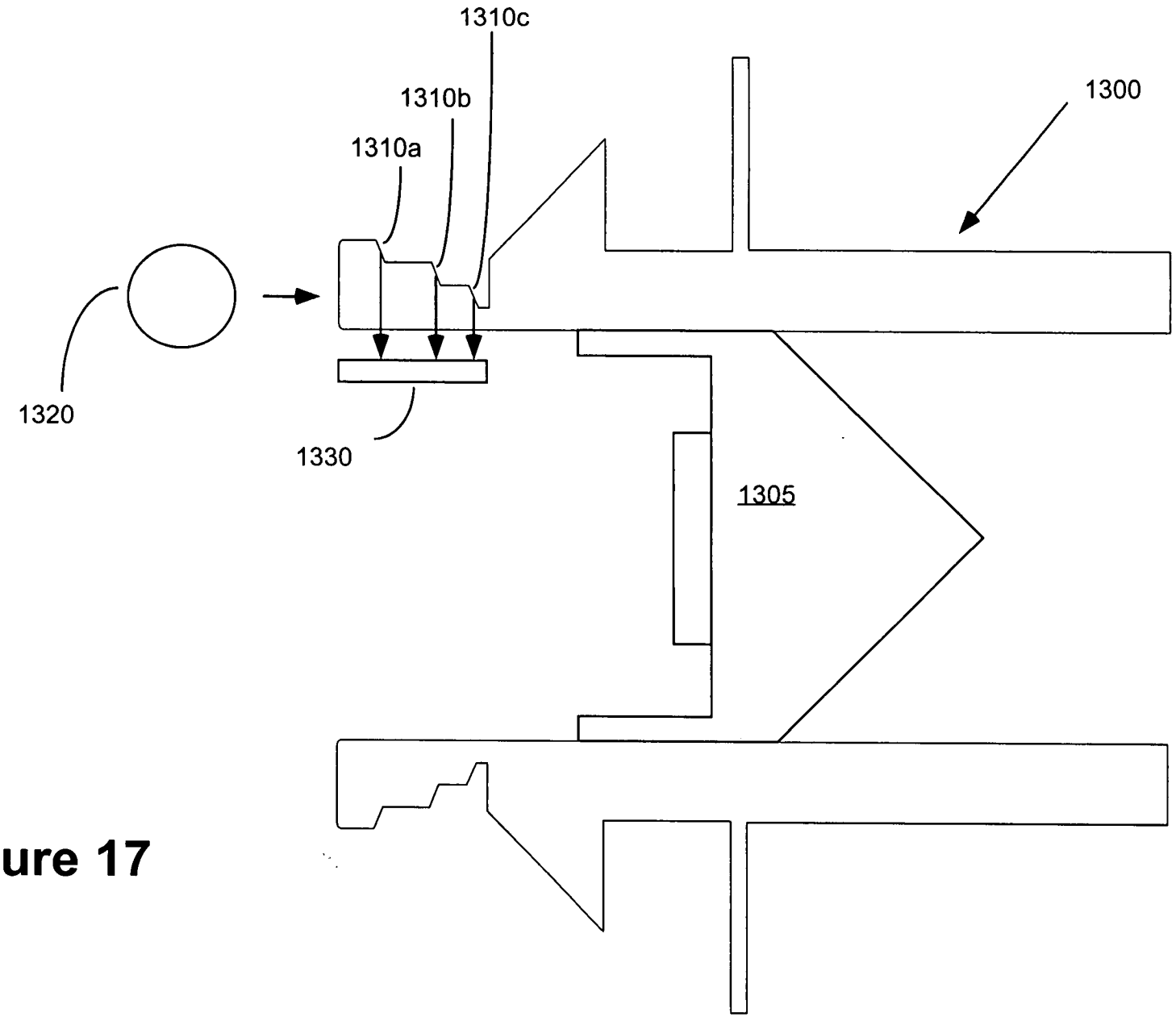


Figure 17